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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,053	09/12/2003	D. Clark Turner	21173.NP	8330

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EXAMINER

THOMAS, COURTNEY D

ART UNIT PAPER NUMBER

2882

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,053

Applicant(s)

TURNER ET AL.

Examiner

Courtney Thomas

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-29 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 10 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/22/03; 02/17/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 21 is objected to because of the following informalities:
2. Claim 21, line 3 recites the phrase "being capable of transmitting." Examiner suggests the phrase be rewritten as "configured to transmit," to convey an explicit functional property/characteristic of the claimed film.
3. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Illustrative example, Claim 1, lines 15-16 recite: "... the vacuum tight assembly being capable of withstanding a temperature greater than approximately 250 degrees Celsius." Examiner concludes that the cited limitation is ambiguous for at least the following reasons: a) The recited temperature threshold appears to be optional ("capable of") as opposed to an explicit thermal resistance characteristic of the recited assembly; b) It is unclear, whether applicant is intending to claim an in process thermal resistance (ability during manufacture to maintain structural integrity under the recited temperature ranges) or post processing (application - i.e. use in an X-ray tube environment). The distinction between in-process and post process thermal characteristics are considerably divergent, hence the ambiguity. (Note claim 21 relates to manufacturing tolerances). Examiner further notes that claim 12, lines 16-17 recite a similar

Art Unit: 2882

deficiency. Dependent claims 2-11 and 13-20 are similarly treated by virtue of their dependencies on claims 1 and 12 respectively.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 3, 4, 6, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Allred et al. (U.S. Patent 5,226,067).

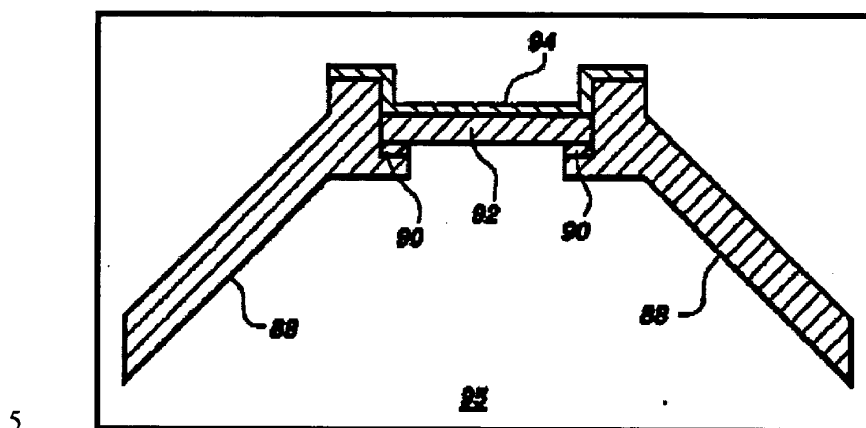


Figure 5-Coated Transmission Window-U.S. Patent 5,226,067 to Allred et al.

6. As per claim 1, Allred et al. discloses a window device comprising: a) a support (88), b) a film (92), c) an adhesive (90), d) a coating (94); wherein the film, adhesive and coating form a vacuum tight assembly (column 3, lines 39-46) and capable of withstanding a temperature greater than approximately 250 degrees Celsius (Fig. 11, not shown above; column 6, lines 13-32; column 8, lines 36-41).

7. **As per claim 2**, Allred et al. discloses a window device wherein the film (92) is directly adhered to the support without any stress relief structure (Fig. 1 above).
8. **As per claims 3 and 4**, Allred et al. discloses a window device wherein the coating (94) also covers an exposed portion of adhesive and covers both evacuated and ambient sides of the film (Fig. 1 above; Fig. 11, not shown above; column 6, lines 13-32; column 8, lines 36-41).
9. **As per claim 6**, Allred et al. discloses a window device wherein the film (92 - Beryllium) includes a native oxide covering that is covered by the coating (94) (see Fig. 1 above).
10. **As per claim 11**, Allred et al. discloses a window device wherein the support forms part of a sealed evacuated chamber, and further comprising an X-ray detector or an X-ray source (column 1, lines 5-22; see also respective Figs., not shown above).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 5, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allred et al. (U.S. Patent 5,226,067) in view of Yoshida (JP 5,066,300).
13. **As per claims 5, and 7-9**, Allred et al. discloses a window device as recited in claim 1, but does not explicitly disclose that the adhesive includes an organic material or a polyimide material.
14. Yoshida discloses a radiation transmission window structure comprising an organic adhesive (17). Yoshida teaches that the use of an organic adhesive including a polyimide (see

Art Unit: 2882

Detailed description para. [0011]) enables window construction with thin beryllium plates (10-100 μm) while providing gas tight connection, and improved mechanical strength of an aperture plate (see Abstract & Detailed Description).

15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Allred et al. such that it incorporated an adhesive, including an organic material. One would have been motivated to make such a modification for the purposes of improving mechanical strength of an aperture plate, enabling thinner aperture plates to be used and to provide gas tight connection within the window structure as suggested by Yoshida (see Abstract & Detailed Description para. [0011]).

Allowable Subject Matter

Claims 10 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. **As per claims 10 and 19**, the examiner found no reference in the prior art that disclosed or made obvious a device, wherein material and thickness of a film transmits at least 10% of incident radiation of wavelength longer than 18.5 Angstroms.

17. Claim 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

18. Claims 21-29 are allowed.

19. The following is a statement of reasons for the indication of allowable subject matter:

20. **As per claim 21 and dependent claims 22-25**, the examiner found no reference in the prior art that disclosed or made obvious a method for making a radiation window device

Art Unit: 2882

comprising the steps of **a)** applying a liquid adhesive to an area of contact between a film and a support, the film configured to transmit soft x-rays and **b)** applying a temperature greater than approximately 250 degrees Celsius to the adhesive, film and support to cure the adhesive as recited in independent claim 21.

21. **As per claim 26 and dependent claims 27-29**, the examiner found no reference in the prior art that disclosed or made obvious a method for making a radiation window device comprising the steps of **a)** applying a liquid polyimide adhesive to an area of contact between a beryllium film and a support and **b)** applying a temperature greater than approximately 250 degrees Celsius to the adhesive, film and support to cure the adhesive as recited in independent claim 26.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Courtney Thomas
Examiner
Art Unit 2882